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(54) Title: METHOD OF ISOLATING AND CULTURING MESENCHYMAL STEM CELL DERIVED FROM CRYOPRESERVED UMBILICAL CORD BLOOD



(57) Abstract: The present invention relates to a method of isolating and culturing mesenchymal stem cells using cryopreserved umbilical cord blood that is most ideal for cell therapy. The method comprises thawing cryopreserved umbilical cord blood and adding  $\alpha$ MEM (alpha-minimum essential medium) thereto, followed by centrifugation to harvest monocytes; isolating CD133 positive cells from the obtained monocytes; and subjecting the isolated cells into suspension culture in the  $\alpha$ MEM containing Stem Cell Factor, GM-CSF (granulocyte-macrophage colony-stimulating factor), G-CSF (granulocyte colony-stimulating factor), IL-3 (interleukin-3) and IL-6 (interleukin-6).